

heat-treating said iron compound catalyst in air at a temperature of 800°C for 15 minutes, are instantaneously contacted with 6.1×10^{-7} mol of carbon monoxide at a temperature of 250°C at a space velocity (SV) of 42,400 h⁻¹ in an inert gas atmosphere using a pulse catalytic reactor,

U said iron oxide particles or said iron oxide hydroxide particles having an average particle size of 0.01 to 2.0 μm, a BET specific surface area of 0.2 to 200 m²/g, a phosphorus content of less than or equal to 0.02 % by weight, a sulfur content of less than or equal to 0.1 % by weight and a sodium content of less than or equal to 0.2 % by weight.

19. (Amended) An iron compound catalyst for inhibiting generation of dioxin according to claim 16, wherein said iron compound catalyst consisting essentially of aggregates consisting essentially of said iron oxide particles, said iron oxide hydroxide particles or the mixed particles thereof,

C2 said aggregates having a specific surface area of not less than 1.0 m²/cm³ when measured under a feed pressure of 1 bar in a dry granulometer, and an average particle size (D50) of 50 % of a total volume thereof, of up to 8.0 μm.

29. (Amended) An iron compound catalyst for inhibiting the generation of dioxin, consisting essentially of aggregates consisting essentially of iron oxide particles, iron oxide hydroxide particles or the mixture particles thereof and having a specific surface area of not less than 1.0 m²/cm³ when measured under a feed pressure of 1 bar in a dry

granulometer, and an average particle size (D50) of 50 % of a total volume thereof, of up to 8.0 μm , and

C3 a catalytic activity capable of converting at least 15 % of carbon monoxide into carbon dioxide when 2.8×10^{-4} mol of iron oxide particles obtained by heat-treating said iron compound catalyst in air at a temperature of 800°C for 15 minutes, are instantaneously contacted with 6.1×10^{-7} mol of carbon monoxide at a temperature of 250°C at a space velocity (SV) of 42,400 h^{-1} in an inert gas atmosphere using a pulse catalytic reactor,

said iron oxide particles or said iron oxide hydroxide particles having an average particle size of 0.01 to 2.0 μm , a BET specific surface area of 0.2 to 200 m^2/g , a phosphorus content of less than or equal to 0.02 % by weight, a sulfur content of less than or equal to 0.1 % by weight and a sodium content of less than or equal to 0.2 % by weight.

C4 32. (Amended) An iron compound catalyst for inhibiting the generation of dioxin, consisting essentially of aggregates consisting essentially of iron oxide particles, iron oxide hydroxide particles or the mixture particles thereof and having a specific surface area of not less than 1.2 m^2/cm^3 when measured under a feed pressure of 1 bar in a dry granulometer, and an average particle size (D50) of 50 % of a total volume thereof, of up to 7.0 μm , and

a catalytic activity capable of converting at least 20 % of carbon monoxide into carbon dioxide when 2.8×10^{-4} mol of iron oxide particles obtained by heat-treating said

iron compound catalyst in air at a temperature of 800°C for 15 minutes, are
instantaneously contacted with 6.1×10^{-7} mol of carbon monoxide at a temperature of
250°C at a space velocity (SV) of 42,400 h⁻¹ in an inert gas atmosphere using a pulse
catalytic reactor,

C4 said iron oxide particles or said iron oxide hydroxide particles having an average
particle size of 0.02 to 1.0 μm , a BET specific surface area of 0.5 to 100 m²/g, a
phosphorus content of less than or equal to 0.005 % by weight, a sulfur content of less
than or equal to 0.1 % by weight and a sodium content of less than or equal to 0.2 % by
weight.
